Abstract: ICA (Independent Component Analysis) is very closely related to the method called blind source separation (BSS). BSS has attracted a lot of research interest in the past decade due to its potential applications in signal processing, telecommunications, and medical imaging. “Blind” means that we know very little, if anything, on the mixing matrix, and make little assumptions on the source signals. Blind source separation attempts to recover independent sources, which have been linearly mixed to produce observations.

The goal of this research is to design a multilayered feedforward neural network in order to separate two or more original source signals from their mixtures. For each of the separated signals, we computed the correlation coefficients with respect to the known (actual) source signals.